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ABSTRACT

A follow-up study of the Early Childhood Education Project (ECEP) was conducted in Richmond, Virginia to determine the effects of preschool experiences on selected aspects of pupil performance at the beginning and completion of grade 1. EPEC is a Head Start type program organized for the regular school year. The sample was divided into three groups: a random sample of children who entered kindergarten with no prior organized preschool experience, pupils who participated in the regular ECEP session, and pupils who participated in both the ECEP and the Summer Head Start programs. The groups were compared on learning readiness on entering grade 1, academic achievement at the end of grade 1, and certain behavioral characteristics, including intellectual abilities, leadership abilities, aggressive behavior, and withdrawn behavior as observed at the end of grade 1. The longer the duration of the preschool educational experience, the higher the scores on the Metropolitan Achievement test; reading and arithmetical concepts and skills gaining most. Results of both standardized tests and teacher ratings indicated that preschool experiences improved academic readiness and performance. (PR)

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FOLLOW-UP STUDY OF PUPILS WITH DIFFERING PRESCHOOL EXPERIENCES

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The results of a recent nationwide evaluation of Head Start programs (spring 1969), utilizing a national sample, indicated few, if any, differences between the subsequent school performance of pupils who participated in Head Start programs and comparable pupils who were not participants in the programs. The findings of this study have very likely influenced planning at the national level with respect to the future of Head Start programs in general. In a similar way, evaluations of local Head Start programs initiated within local school systems are essential to planning and may supplement the findings of more comprehensive studies.

A follow-up study of pupils with different preschool experiences, including Head Start, has been completed within the Richmond, Virginia, public school system. The purpose of the study was to determine the effects of several types of preschool programs upon selected aspects of pupil performance at the beginning, and completion, of Grade 1.

Sample -- The subjects for the study were drawn from 1967-68 Grade 1 classes in schools which had Early Childhood Education[1] programs during 1965-66 prior to the kindergarten year. Pupils were divided for comparative purposes into three groups:

Group A: A random sample of pupils who entered kingergarten with no prior organized preschool experiences (N=67).

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[1]Note: The term "Early Childhood Education" is used in Richmond, Virginia, public schools to identify a Head Start-type program which is carried on during the regular school year.

Group B: Pupils who entered kindergarten after participating during the regular school year in the Early Childhood Education program (N=32).

Group C: Pupils who entered kindergarten after Early Childhood Education plus summer 1966 Head Start experiences (N=27).

The groups were comparable as to age and sex.

Procedure -- Groups A, B, and C were compared on the following aspects of performance and behavior:

1. Readiness for learning upon entering Grade 1 as measured by the Metropolitan Readiness Test, routinely administered to all Grade 1 pupils in October.
2. Academic achievement upon finishing Grade 1 as measured by the Metropolitan Achievement Test, Form A, Primary I Battery, administered at the end of the second year.
3. Several behavioral characteristics observed upon finishing Grade 1, including (a) intellectual abilities, (b) leadership abilities, (c) aggressive behavior, and (d) withdrawn behavior. These characteristics were measured by teachers who used locally developed rating scales to assess them. Teachers who tested and rated their pupils in class groups were unaware of the objectives of the study until conclusion of the evaluation.

The analysis of variance was used to test the significance of differences on the Metropolitan tests with the acceptable level for significance set at .05. Teacher ratings were tested using chi square analysis, with a significance level of .05.

Results:

1. Readiness for learning upon entering Grade 1 as estimated through the use of the Metropolitan Readiness Tests revealed that, with the exception of Subtest One (Word Meaning), Group C attained the highest average scores, followed in order by Groups B and A. The national percentile ranks corresponding to the mean scores for Groups A, B, and C are 44, 57, and 65, respectively. These percentile ranks give an indication of how each group compares in overall readiness status to a representative group of beginning first grade pupils.

When differences between groups in average total attainment and in attainment on the several subtests were analyzed by the analysis of variance, the following results were obtained:

It was found that the difference in total score of 9.30 points between Groups A and C significant at the .05 level. As measured by Metropolitan Readiness Tests total scores, pupils with Early Childhood Education experiences followed by summer Head Start activities attained an appreciably higher level of total readiness for learning than did pupils who did not have these experiences.

On the skills measured by the matching subtest and the alphabet subtest, the average scores attained by Groups B and C were significantly higher ($P < .05$) than the average scores of Group A.

The results suggest that organized preschool educational experiences favorably influenced subsequent readiness for learning as measured by the Metropolitan Readiness Test total scores and several subtest scores. It should be noted that while differences between the groups were not sufficiently large on all subjects to

conclusively rule out their occurrence by chance, all differences except those related to Subtest One (Word Meaning) were in favor of pupils with preschool experiences.

2. Academic achievement upon finishing Grade 1 was measured by use of the Metropolitan Achievement Tests, Form A, Primary I Battery. Analysis of these test results revealed that in every subtest Group C attained the highest average raw score, followed in order by Groups B and A. In only two instances (Word Knowledge and Arithmetic Concepts and Skills for Group C) did average achievement reach or exceed the 50th percentile in terms of national norms.

Differences in average raw scores of the groups for each subtest were tested for statistical significance by analysis of variance procedures.

On the Word Knowledge subtest, a significant difference ($P < .05$) was found between the means of Groups A (15.56) and C (24.80).

No differences among the means of groups on the Word Discrimination test were large enough to prove significant.

The difference betweem Groups A (Mean=12.67) and C (Mean=20.67) proved significant ($P < .05$) when reading test results were examined.

In the area of arithmetic concepts and skills, significant differences ($P < .05$) were found to exist between the means of Groups B (39.20) and C (54.67) as well as between the means of Groups A (35.78) and C.

Grade 1 pupils who had organized preschool educational experiences attained higher scores on all subtests of the Metropolitan Achievement Tests than did pupils lacking these experiences. In several instances, as described in the preceding paragraphs, the score differences were

significantly different at P<.05. The data obtained in this study indicate that the longer the duration of organized preschool educational experiences, the higher the scores on the Metropolitan Achievement Tests.

3. Behavioral Characteristic:

Rating scales were utilized by teachers to assess certain behavioral characteristics of their pupils. The scales, developed by the Department of Research, Richmond Public Schools, are Based upon the work of Jack Kough and Robert F. DeHaan (1955).

Differences between ratings received by Groups A, B, and C were subjected to chi square analysis, with the acceptable level of significance being .05. Findings in each area measured are presented below.

a. Intellectual ability-- On the basis of teacher ratings, pupils in Group C displayed behavior indicative of high intellectual ability significantly more often (P<.05) than did pupils in Groups A and B.

b. Leadership ability-- Group C pupils exhibited leadership abilities significantly more often (P<.05) than pupils in Groups A and B. No significant differnces were found between Groups A and B.

c. Aggressive behavior-- The frequency of aggressive behavior, as rated by teachers, was found to be significantly lower for pupils in Group A than for pupils in Groups B and C. The incidence of such behavior was not significantly different between Groups B and C.

d. Withdrawn behavior -- Group C pupils displayed behavior associated with withdrawal tendencies significantly less frequently ($P < .05$) than did pupils in the other two groups. No significant difference with respect to withdrawn behavior existed between Groups A and B.

Summary and Discussion:

This follow-up study attempted to examine the impact of particular types of preschool experiences of differing lengths on the subsequent school performance of young children. The results of both standardized tests and teacher ratings support the contention that these preschool experiences improved school readiness and performance. In all except one of the readiness areas measured, and all of the academic achievement areas for the second year of school, children with both Early Childhood Education and Head Start experiences attained the highest scores. Head Start-only children were second in performance, ahead of those children with no preschool experience.

The teachers rated the children longer preschool experience (Early Choldhood Education and Head Start) as clearly superior in three out of the four behavioral areas, with no significant differences between the other groups.

While these results conflict with nationally publicized reports of Head Start results (summer 1969), it should be noted that the children described here continued their regular school experience in the same schools where they had preschool or Head Start experiences. This may not have been the case with the national sample. Thus, continuity of experiences could be a contributing factor in the results obtained.

REFERENCES

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